

**TELEFAX**IN THE CLAIMS

The present set of claims replaces all previous sets of claims currently on file:

**Claim 1 (Original)** A system for monitoring and reporting a volume of data transferred between an end user and a data network during a data session, said system comprising:

a Network Access Server (NAS) that provides the end user with access to the data network; and

an accounting server in communication with the NAS that maintains accounting records for the network, said accounting server including a Prepaid Server (PPS) function that maintains an account balance for the end user comprising a volume of data that the end user is authorized to transfer, said PPS function informing the accounting server, during setup of the data session, of a predetermined volume of data that the end user may transfer during the session;

said NAS monitoring the volume of data transferred between the end user and the data network during the data session, and sending interim accounting messages during the session to the accounting server, each interim accounting message reporting a cumulative volume of data transferred during the data session prior to sending the interim accounting message;

said accounting server receiving the interim accounting messages from the NAS, determining when the predetermined volume of data has been transferred, and notifying the PPS function when the predetermined volume of data has been transferred;

said PPS function notifying the accounting server when the account balance for the end user goes below a threshold volume of data; and

said accounting server notifying the NAS that the data session should be terminated when the accounting server is notified that the account balance for the end user has gone below the threshold volume of data.

**Claim 2 (Original)** The system of claim 1 wherein the PPS function is implemented in a standalone Prepaid Server (PPS) in communication with the accounting server.

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8400 Decarie Boul.  
Montreal, QC H4P 2N2 CANADA

Tel: 1-514-345-7900  
Fax: 1-514-345-7929

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**Claim 3 (Original)** The system of claim 2 wherein the PPS informs the accounting server of a predetermined volume of data that the end user may transfer during the session such that when the accounting server notifies the PPS that the predetermined volume of data has been transferred, there is still a sufficient volume remaining in the end user's account for the session to continue while the PPS notifies the end user to purchase additional data volume.

**Claim 4 (Original)** The system of claim 2 wherein the PPS informs the accounting server of a predetermined volume of data that the end user may transfer during the session such that when the accounting server notifies the PPS that the predetermined volume of data has been transferred, there is still a sufficient volume remaining in the end user's account for the session to continue, and the PPS informs the accounting server of a second predetermined volume of data that the end user may transfer during the session.

**Claim 5 (Original)** The system of claim 1 wherein the accounting server also informs the NAS of a triggering volume of data that triggers the NAS to send an accounting stop message to the accounting server.

**Claim 6 (Original)** The system of claim 1 wherein the end user is a mobile station, and the NAS is a Packet Data Service Node (PDSN).

**Claim 7 (Original)** During a data session, a method of monitoring and reporting a volume of data transferred between an end user and a data network having a Network Access Server (NAS), and an accounting server in communication with the NAS, said accounting server including a Prepaid Server (PPS) function, said method comprising the steps of:

- maintaining by the PPS function, an account balance for the end user comprising a volume of data that the end user is authorized to transfer;

- providing the end user with access to the data network through the NAS;

- sending an access accept message from the PPS function to the accounting server during setup of the data session, said access accept message indicating a predetermined volume of data that the end user may transfer during the data session,

- monitoring by the NAS, the volume of data transferred between the end user and the data network during the data session;

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sending from the NAS to the accounting server, a series of interim accounting messages during the data session, each interim accounting message reporting a cumulative volume of data transferred during the data session prior to sending the interim accounting message;

notifying the PPS function by the accounting server, that the predetermined volume of data has been transferred;

notifying the accounting server by the PPS function, that the account balance for the end user has gone below a threshold volume of data; and

notifying the NAS by the accounting server, that the data session should be terminated when the accounting server is notified that the account balance for the end user has gone below the threshold volume of data.

**Claim 8 (Original)** The method of claim 7 wherein the PPS function is implemented in a standalone Prepaid Server (PPS) in communication with the accounting server.

**Claim 9 (Original).** The method of claim 7 further comprising, after the step of notifying the PPS function by the accounting server, that the predetermined volume of data has been transferred, the steps of:

determining by the PPS function whether there is still a sufficient volume remaining in the end user's account for the session to continue; and

offering the end user an option to purchase additional data volume, upon determining that there is still a sufficient volume remaining in the end user's account for the session to continue.

**Claim 10 (Original)** The method of claim 7 further comprising, after the step of notifying the PPS function by the accounting server, when the predetermined volume of data has been transferred, the steps of:

determining by the PPS function whether there is still a sufficient volume remaining in the end user's account for the session to continue; and

informing the accounting server by the PPS function, of a subsequent predetermined volume of data that the end user may transfer during the session, upon determining that there is still a sufficient volume remaining in the end user's account for the session to continue.

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Claim 11 (Original) The method of claim 7 wherein the step of sending an access accept message from the PPS function to the accounting server also includes sending an indication of a triggering volume of data, said method further comprising the steps of:

    sending the indication of the triggering volume of data to the NAS;

    determining by the NAS whether the volume of data transferred equals the triggering volume of data; and

    sending an accounting stop message from the NAS to the accounting server upon determining that the volume of data transferred equals the triggering volume of data.

Claims 12-16 (Cancelled)

Claim 17 (New) The method of claim 7, for monitoring and reporting a volume of data transferred between a mobile station (MS) and the data network during a handoff procedure in which the MS is handed off from a first Packet Data Service Node (PDSN-1) to a second Packet Data Service Node (PDSN-2) during a data session, said method comprising the steps of:

    establishing the data session through PDSN-1;

    sending a handoff request from PDSN-2 to PDSN-1;

    stopping by PDSN-1, a first accounting session between PDSN-1 and the accounting server;

    establishing a data tunnel between PDSN-1 and PDSN-2, wherein the step of establishing a data tunnel between PDSN-1 and PDSN-2 includes establishing a Point-to-Point Protocol PPP connection between PDSN-1 and PDSN-2;

    passing data from PDSN-1 through the data tunnel to the MS during the handoff procedure, PDSN-1 monitoring the volume of data being passed through the tunnel;

    requesting by PDSN-2, that the tunnel be torn down when the handoff procedure is completed;

    sending from PDSN-1 to PDSN-2, an indication of the volume of data that was passed through the tunnel during the handoff procedure;

    starting by PDSN-2, a second accounting session between PDSN-2 and the accounting server; and

    sending from PDSN-2 to the accounting server, the indication of the volume of data that was passed through the tunnel during the handoff procedure, wherein the NAS is the second PDSN-2, the Prepaid Server (PPS) function is in communication with the accounting server that maintains an

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account balance for the MS that indicates the maximum volume, and the method further comprises the steps of:

sending an access request message from the accounting server to the PPS, said access request message including the indication of the volume of data that was passed through the tunnel during the handoff procedure; and

determining by the PPS, a new maximum volume of data that the MS may transfer during the data session by subtracting the volume of data that was passed through the tunnel from the maximum volume of data that the MS may transfer and wherein said access accept message is indicating the new maximum volume.

**Claim 18 (New)** A Network Access Server (NAS) adapted to provide an end user with access to a data network in a system for monitoring and reporting a volume of data transferred between the end user and the data network during a data session, said system comprising an accounting server in communication with the NAS that maintains accounting records for the network, said accounting server including a Prepaid Server (PPS) function that maintains an account balance for the end user comprising a volume of data that the end user is authorized to transfer, said PPS function informing the accounting server, during setup of the data session, of a predetermined volume of data that the end user may transfer during the session;

said NAS being adapted to monitor the volume of data transferred between the end user and the data network during the data session, and to send interim accounting messages during the session to the accounting server, each interim accounting message reporting a cumulative volume of data transferred during the data session prior to sending the interim accounting message;

said accounting server receiving the interim accounting messages from the NAS, determining when the predetermined volume of data has been transferred, and notifying the PPS function when the predetermined volume of data has been transferred;

said PPS function notifying the accounting server when the account balance for the end user goes below a threshold volume of data; and

the NAS being adapted to receive a notification from the accounting server that the data session should be terminated when the accounting server is notified that the account balance for the end user has gone below the threshold volume of data.

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Claim 19 (New) An accounting server for a system for monitoring and reporting a volume of data transferred between an end user and a data network during a data session, said system comprising a Network Access Server (NAS) that provides the end user with access to the data network; wherein

the accounting server in communication with the NAS that maintains accounting records for the network, said accounting server including a Prepaid Server (PPS) function that is adapted to maintain an account balance for the end user comprising a volume of data that the end user is authorized to transfer, said PPS function being adapted to inform the accounting server, during setup of the data session, of a predetermined volume of data that the end user may transfer during the session;

the accounting server being adapted to receive interim accounting messages during the session from said NAS, the NAS monitoring the volume of data transferred between the end user and the data network during the data session, each interim accounting message reporting a cumulative volume of data transferred during the data session prior to sending the interim accounting message;

said accounting server receiving the interim accounting messages from the NAS, determining when the predetermined volume of data has been transferred, and notifying the PPS function when the predetermined volume of data has been transferred;

said PPS function being adapted to notify the accounting server when the account balance for the end user goes below a threshold volume of data; and

said accounting server being adapted to notify the NAS that the data session should be terminated when the accounting server is notified that the account balance for the end user has gone below the threshold volume of data.

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